

**Notice of Allowability**

Application No.

10/712,214

Applicant(s)

BACH, SUSAN E.

Examiner

Phuong Phu

Art Unit

2611

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Response filed on 8/14/07.
2. ☒ The allowed claim(s) is/are 1-3, 12 and 14-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date _____    | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### **DETAILED ACTION**

1. This Office Action is responsive to the Response filed on 8/14/07. Accordingly, claims 1-3, 12 and 14-16 are currently pending; and claims 4-11, 13 and 17-20 are canceled.

### **REASONS FOR ALLOWANCE**

2. Claims 1-3, 12 and 14-16 are allowed.
3. The following is an examiner's statement of reasons for allowance:

-Regarding independent claim 1, none of prior art of record teaches or suggests an equalizing apparatus for use in equalizing a received signal, comprising: an equalizer including a plurality of adjustable tap weights that equalizes the received signal based on values of the adjustable tap weights; a tap weight update calculation unit having an input coupled to an output of the equalizer and adapted to determine adaptive tap weight updates for use in adjusting the tap weights during operation of the equalizer; and a summer coupled to the tap weight update calculation unit, wherein the summer is adapted to combine each of the tap weight updates with one of tap weight update offset values to produce a modified tap weight update and wherein the summer is coupled to the equalizer to provide the modified tap weight updates to the equalizer to adjust the tap weights.

-Regarding independent claim 12, none of prior art of record teaches or suggests an equalizing apparatus for use in equalizing a received signal, comprising: an equalizer including a plurality of adjustable tap weights that equalizes the received signal based on values of the adjustable tap weights; a demodulator having an input coupled to an output of the equalizer to produce a demodulated signal; a zero forcing tap weight update calculation unit coupled to the demodulator and adapted to determine tap weight updates from the demodulated signal for use in

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adjusting the tap weights during operation of the equalizer, wherein the zero forcing tap weight update calculation unit uses a zero forcing algorithm to calculate tap weight updates; and a summer coupled to the tap weight update calculation unit, wherein the summer is adapted to combine each of the tap weight updates with one of tap weight update offset values to produce a modified tap weight update and wherein the summer is coupled to the equalizer to provide the modified tap weight updates to the equalizer to adjust the tap weights.

-Regarding independent claim 14, none of prior art of record teaches or suggests a method of controlling the equalization of a received signal, comprising procedures of: equalizing the received signal using an equalizer that includes a plurality of tap weights; using an output of the equalizer to determine a set of tap weight updates; combining tap weight update offset values with the tap weight updates to produce a set of modified tap weight updates; and using the set of modified tap weight updates to adjust the plurality of tap weights used in the equalizing.

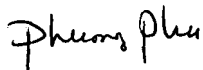
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (8:00 AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Phuong Phu  
08/22/07

**PHUONG PHU  
PRIMARY EXAMINER**

Phuong Phu  
Primary Examiner  
Art Unit 2611